

THE MARS MISSION COVER-UP

**The newly
released
"McDaniel Report"
clearly shows that
NASA does not
want the public to
know too much
about the
mysterious
monuments of
Mars.**

Extracted from
THE MCDANIEL REPORT

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BACKGROUND AND PURPOSE

A great scientific experiment came to a climactic and frustrating end when, on 21st August 1993, communication with NASA's Mars Observer spacecraft was reported lost after its successful completion of an eleven-month journey to the Red Planet.² Just three days before it was to enter Mars orbit, but shortly after instructions for orbital insertion had been uploaded, the spacecraft mysteriously failed to respond to commands from the ground or to signal its presence to its controllers at the Jet Propulsion Laboratory in Pasadena, California. In the weeks following, repeated attempts to restore communications have been made. As of this writing, all efforts have failed.

This apparent tragedy, ending the first mission to Mars since the Viking probes of 1976, is part of a much larger story—a story of deception and scientific irresponsibility designed to suppress or prevent what might be one of the greatest scientific discoveries in all of human history. With a replacement mission in the planning, a very real possibility exists that the scenario that dominated the Mars Observer mission may be repeated. This report chronicles the ongoing picture of scientific, ethical and political concern within which the Mars Observer mission took place, in the hope that the mistakes and distortions that plagued that mission will not be repeated.

THE MARS OBSERVER SPACECRAFT

The Mars Observer, launched 25th September 1992, was the first of an "Observer series" of missions for planetary exploration. The principal objective of the mission was to gather information on the geology and climate of Mars.³ Mars Observer was scheduled to reach its destination in August 1993 and begin its "mapping phase" by November 1993. The mapping phase was to last for one Martian year, or 687 days.⁴ During this phase the Mars Observer camera would relay low-resolution photographs of the entire planet daily. It would also take moderate-resolution photographs (size of smallest visible objects 300 metres) and high-resolution photographs (size of smallest visible objects 11 and 1.4 metres) for the purpose of securing geological and albedo (reflectivity) information on targeted areas of interest.⁵ The Mars Observer was reported "lost" by NASA on 21st August 1993, shortly after instructions for orbital insertion had been sent to the spacecraft. At this writing, communication with the spacecraft has not been reestablished, and NASA is still attempting to overcome the problem. It is not known whether the Mars Observer has gone into orbit around Mars or has passed the planet and entered a solar orbit.⁶

THE AOC HYPOTHESIS

During the 1976 Viking mission to Mars, photographs of the planet were obtained at a 50-metre resolution.⁷ In the seventeen years since then independent research groups have engaged in an exhaustive study of certain unusual surface features revealed in the Viking images, most of which are located in an area of Mars known as the Cydonia Plain.⁸ All of the independent researchers have concluded that the data supports the possibility that some features at Cydonia may be the ruins of intelligently designed structures. I will refer to the hypothesis that the Cydonia features may be of artificial origin as the AOC hypothesis (Artificial Origin at Cydonia).

The AOC hypothesis does not claim that there is *proof* of artificial features on Mars; it claims that the probability of there being artificial features is strong enough to make new high-resolution photographs a top priority for any future mis-

sion to that planet—including the Mars Observer mission, should communications with that spacecraft be restored.⁹

Some of the researchers have gone further in their hypotheses regarding the Martian objects, and others have not. The present discussion is not intended to support or deny any features of these extended hypotheses.¹⁰ The immediate purpose of this paper is to determine and evaluate the relationship between evidence supporting the AOC hypothesis and NASA's policy on setting priority levels for targeting the Cydonian features for observation, as well as NASA's policies regarding public access to any such data once it is obtained.¹¹ The long-term purpose is to illustrate the political, ethical and scientific tension that arises when the potential of a discovery that could cause a major shift in our understanding of ourselves and our history comes up against the biases of individual scientists and the interests of a government bureaucracy.

PRIORITY LEVELS

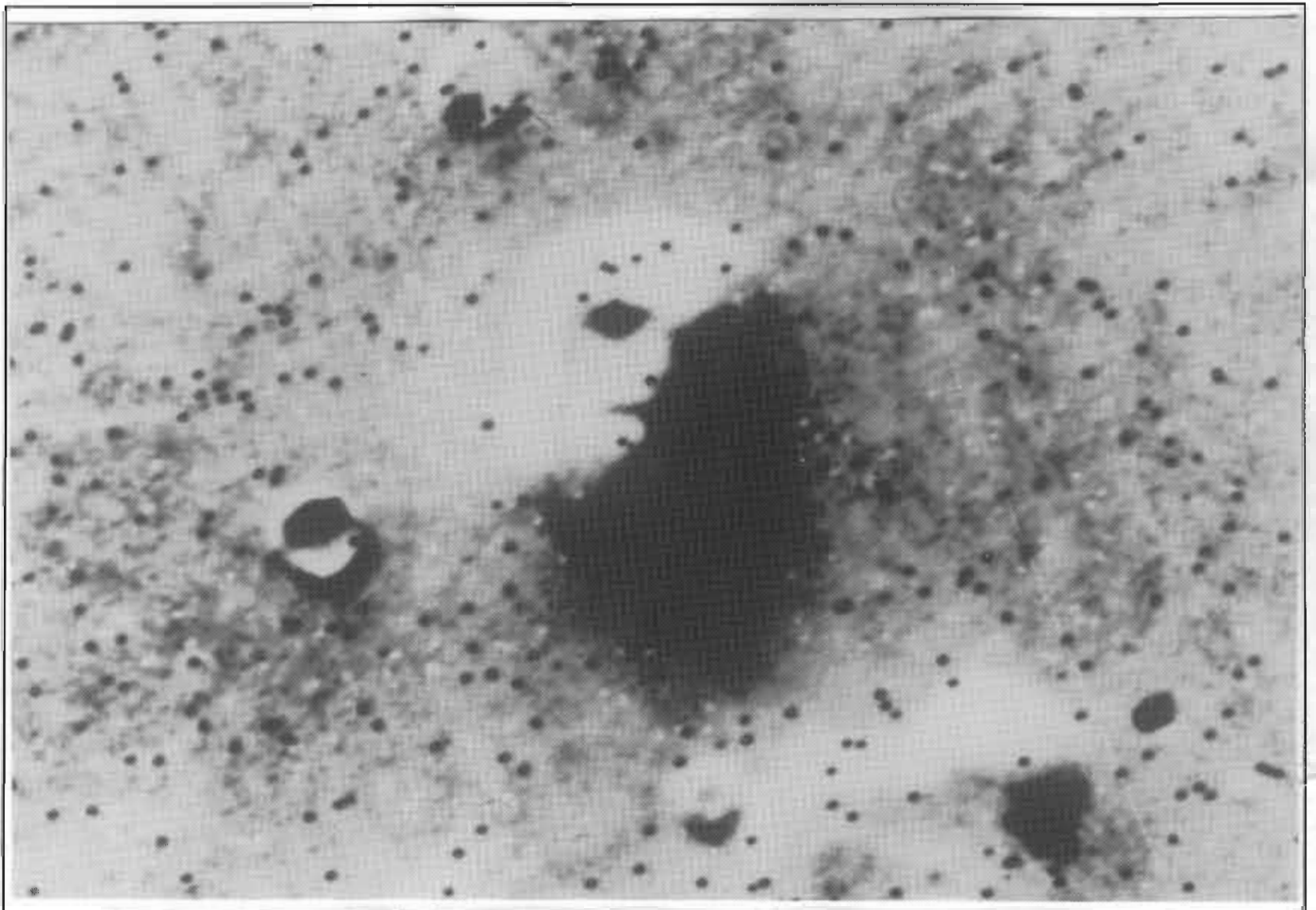
This report has been prompted in part by a document distributed by NASA titled "Information on NASA Re-pho-

tographing the Cydonia Region of Mars" and letters written in January and October 1992 by Dr Michael Malin, NASA Mars Observer Camera Principal Investigator, and Mark A. Pine, Chief of the Policy and Plans Branch of the NASA Office of Space Science and Applications (references 8, 9 and 11).

Dr Malin's letter indicates that the Cydonia region of Mars, where the AOC landforms are located, was targeted for high-resolution photography as part of a general plan to secure images of scientifically interesting natural geological formations. However, the AOC hypothesis played no significant role in the prioritising of NASA objectives. This position is reiterated in the letter from Mark A. Pine and in other NASA documents: "NASA has no plans to treat images of the Cydonia region any differently than those of the other regions of the Martian surface."¹² While the region in general may be targeted, this does not guarantee any special effort to image the AOC

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landforms. Careful analysis of NASA priorities as embodied in the Mars Observer mission indicates that in all probability they would not be included.



Enlargement of NASA Viking frame 35A72, showing the Face feature. Estimated dimensions of the 'Face of Cydonia' are: 2.5km long, 2km wide, and between 500 and 800 m high.

TECHNICAL UNCERTAINTIES

Both Dr Malin and Mr Pine were also careful to stress that because of technical uncertainties no guarantees could be made regarding photographs of any specific features. Yet plans were under way to photograph other specific features than the AOC landforms, and in these cases, instead of emphasizing technical uncertainties, discussion of ways and means of accomplishing this took place. The special emphasis given to the possibility of difficulties in the particular case of the AOC landforms has a clearer rationale as part of a general pattern of discouraging interest in those particular landforms.

RESTRICTION OF INFORMATION

As the Mars Observer mission proceeded, considerable furor arose in connection with NASA's policy for data release. NASA announced that in the case of the Mars Observer mission, unlike previous missions, there would be *no immediate transmission of photography to the public*. Data may be withheld from the public for as long as six months solely at the discretion of the "Principal Investigators" holding private contracts with NASA (reference 9). As of June 1993 there were indications that NASA, under considerable public pressure to modify this policy, was considering easing the restriction (see Chapter Nine). However, hopes for this were dashed when NASA announced that only "selected" images were to be made available for viewing at two or three sites around the country with no release to the general public via NASA Select-TV. There was no guarantee that these images would include the AOC landforms.¹⁹ To see the images, a person would have to travel to Pasadena, Washington or Houston and then sit watching a special screen for hours or days with no assurance that the AOC objects would be imaged at all—or, if imaged, "selected" for viewing. NASA was apparently trying to create the impression of a more liberal policy on data release without actually making any significant change. In later chapters of this report, NASA's policy on data release will be discussed in detail. The summary conclusion is that for the Mars Observer mission, NASA introduced a severe restriction on data release, providing a new potential for censorship, under cover of a technicality.

Since 1979, a number of highly qualified independent investigators have engaged in an extensive analysis of photographs taken by the 1976 Viking Mars mission. These photographs appear to be evidence that some landforms in the Martian region called Cydonia may be artificial.

A comprehensive independent analysis of the data supporting this hypothesis, using established criteria for scientific methodology, shows that the methods of research pursued by the independent investigators are basically sound. There is a reasonable doubt as to the natural origin of the Cydonian objects. Reputable scientists in several fields, including physics, astronomy and geology, have expressed their confidence in the overall integrity of this report and have called for further investigation of these landforms by NASA.¹

However, during the seventeen years since the controversial landforms were discovered, NASA has maintained steadfastly that there is "no credible evidence" that any of the landforms may be artificial. A close look at NASA's arguments reveals that NASA's "evaluation" has consisted largely of initial impressions from unenhanced photographs, heavily weighted by faulty reasoning. NASA has failed to apply any special methods of analysis; it has relied upon flawed reports; it has failed to attempt verification of the enhancements and measurements made by others; and it has focused exclusively on inappropriate methodology which ignores the importance of context. There remains no scientific basis for NASA's position regarding the landforms.

Finally, NASA has based its evaluation almost exclusively on the alleged existence of disconfirming photographs which it has never identified, and has recently admitted it is unable to identify.

Instead of carrying out legitimate scientific inquiry, NASA has regularly sent false and misleading statements regarding the landforms to members of Congress and their constituents. NASA has condoned efforts to unfairly ridicule and discredit independent researchers, and has insisted that there is a "scientific consensus" that the landforms are natural—despite the fact that the only real scientific study of the landforms indicates a clear possibility that they are artificial.

Of the various landforms investigated by the independent teams and individuals, the one that began the research, referred to as the "Face" because of its resemblance to a humanoid face, has

undergone one of the most exhaustive series of tests for the evaluation of digital images originating from an interplanetary probe available to scientists today. The data collected in the course of these investigations appears to be highly reliable.

The most advanced techniques of image enhancement, photogrammetry and fractal analysis, confirmed by cross-checking and thoroughly documented, have been used. The investigators are acknowledged experts in their fields with strong academic and professional qualifications. In every test, the data has consistently tilted in the direction of artificial, rather than natural, origin. Moreover, the various tests performed, including anthropometric and aesthetic evaluation, have been mutually cross-confirming.

In September 1992 a new spacecraft—the Mars Observer—was launched. Now reported lost, the Mars Observer carried a camera capable of taking high-resolution photographs that would almost certainly have settled the question of artificiality. But NASA's position regarding the priority assigned to photographs of the landforms has been throughout to resist any consideration of their possible artificial origin. NASA's equivocal statements on the issue of priorities indicated a clear likelihood that new photographs of the suspect landforms would not be obtained, or would not be released if they were obtained.

If NASA's Mars Observer policy remains unchanged, future missions to Mars will almost certainly not include any meaningful effort to settle the question of artificiality. NASA

Unlike previous missions, there was to be no conveyance of camera data to the public as soon as it was received and converted into viewable images (what is often called 'live' transmission).

is in the process of evaluating options for a new Mars launch as early as October 1994. As of this writing, the selection of the spacecraft and instrumentation to be used for a new launch is under way, allowing the previous policy to dominate a new mission would constitute a reprehensible abdication of a clear and compelling social responsibility.

NASA'S POSSIBLE MOTIVATION

In 1960, a report titled *Proposed Studies on the Implications of Peaceful Space Activities for Human Affairs* was delivered to the Chairman of NASA's Committee on Long-Range Studies. The report was prepared under contract to NASA by the Brookings Institution, Washington, DC. The report outlines the need to investigate the possible social consequences of an extraterrestrial discovery and to consider whether such a discovery should be kept from the public in order to avoid political change and a possible "devastating" effect on scientists themselves—due to the discovery that many of their own most cherished theories could be at risk.

The concept of withholding information on a possible extraterrestrial discovery conflicts with an understood NASA policy to the effect that information on a verified discovery of extraterrestrial intelligence should be shared promptly with all humanity. A report on the cultural aspects of the search for extraterrestrial intelligence (SETI) is presently being prepared for publication by the NASA Ames Research Center. In this report, the position that NASA would not withhold such data from the public is said to be strongly supported.

NASA's actual behaviour in the specific case of the Martian objects, however, does not appear to be consistent with this policy. NASA has regularly distributed documents containing false or misleading statements about its evaluation of the Face to members of Congress and to the public. The absence of legitimate scientific evaluation of the landforms by NASA, its ignoring of the relevant research, its apparently exaggerated warnings that such photographs would be extremely difficult to obtain, the possible sequestering of the data under the aegis of 'private contract', and the ambiguous language used by NASA officials to generate a sense of complacency around the issue all support the suspicion of a motivation contrary to the stated policy.

MISLEADING ASSURANCES

When forwarded enquiries from constituents by United States senators and representatives, NASA has provided answers which may appear plausible to the uninformed, but which cannot withstand even the slightest logical scrutiny. Among the various misleading assurances given by NASA are those having to do with NASA's policy for Mars Observer camera data release. On the first mission to Mars in seventeen years, with growing public interest in the artificiality hypothesis and NASA's vigorous resistance to that hypothesis, NASA made a radical change in the way photographic data from the spacecraft would be handled. Unlike previous

missions, there was to be no conveyance of camera data to the public as soon as it was received and converted into viewable images (what is often called 'live' transmission). Instead, images from the Mars Observer camera would be under the exclusive control of a private contractor for up to six months after acquisition.

This same private contractor had been given sole authority to determine not only what images would be released and when, but even *what objects would be photographed by the high resolution camera*. That contractor, Dr Michael Malin, is an outspoken opponent of the hypothesis of possible artificiality. Dr Malin's arguments against the hypothesis of possible artificiality have been uniformly fallacious. Thus the interests of the American public in relation to Mars Observer camera data were effectively turned over to the prejudiced decisions of a private individual.

The credibility gap widened as NASA, using contractual technicalities, insisted that it was treating Mars Observer imaging data "no differently" than data from previous missions—despite the fact that the end result would have been radically different as far as immediate public access and public accountability were concerned. It is impossible, from a logical standpoint, to see NASA's efforts to claim "no change in previous policy" as anything but a transparent attempt at misdirection.

In the face of growing public clamour, NASA also began to make assurances that the "Cydonia region" where the landforms are located was scheduled to be photographed by the high-resolution camera. NASA clearly attempted to put the public at ease by making it appear that the landforms would likely be photographed because of NASA's general interest in the geology of the "region". But the Cydonia

region is a vast area, and high-resolution photography would cover only a very small percentage of that area. No special priority for the specific landforms in question has ever been contemplated. Under the standing policy, the likelihood is high that the landforms will not be photographed, regardless of assurances about the "region".

RECOMMENDATIONS

Given the importance of the subject and the urgent need to take action, I have put forward the following recommendations. These recommendations apply to the Mars Observer mission in the event the spacecraft is recovered, and to any future missions, including a mission specifically to replace the Mars Observer.

- Assuming Mars Observer is not recovered, NASA will select a replacement spacecraft carrying instrumentation capable of achieving high-resolution imaging of the Martian surface at least superior to that of the Viking missions of 1976, and having the highest degree of camera flexibility possible, including pointing capability.

- NASA and any private contractor who may be involved in imaging, by agreement, will assign a level of priority to the suspect landforms that will ensure the obtaining of high-reso-

All of the independent researchers have concluded that the data supports the possibility that some features at Cydonia may be the ruins of intelligently designed structures.

lution photographs of those landforms, using all means at their disposal, subject only to uncertainties beyond their control. This priority level will be entered into the imaging Target Data Base and taken into consideration in mission sequencing. The stated purpose of taking such photographs will include the possibility that they are of artificial origin.

- The camera operator will plan for and initiate high-resolution imaging sequences on *every occasion* (20 to 30 times in the case of Mars Observer) during which the spacecraft groundtrack is within the area from 8° to 10° longitude, such that the image strips include the area 40.4° to 41.2°N latitude.

- All imaging data gathered during camera passes over the area specified above, will be placed in the category 'news-worthy' and will not be subject to the proprietary aspects of any principal investigator's contract with NASA. This includes the raw data prior to processing, but after the camera data has been separated from that of other instrumentation.

- The scientific community and the general public will be given advance notice, within the constraints of predictability, as to when each such pass will occur, in order to prepare to receive the data.

- The raw data for the specific area indicated above will be released to scientists and to the public upon receipt at JPL with no time delay.

- Video image conversion of data received in the same passes will be released in a continuous stream to NASA Select-TV, PBS and others who desire to receive it. NASA will be held accountable for any inordinate delay between receipt of the raw data and release of video imagery. No delay should occur other than the minimum time period nec-

essary for computers to convert the data to video form. NASA should provide in advance specific technical details of what procedures are necessary for conversion and how long they are likely to take.

- Video image conversion of *all* high-resolution camera activity, regardless of location on the planet's surface, will be released in a continuous stream to NASA Select-TV, PBS and others who desire to receive it throughout the course of the mission. Because of its extreme importance, this data release will take precedence over regular NASA programming for as long as is necessary to achieve the goal of providing the public with open access to the data that may settle the question of artificiality.

- A blue-ribbon interdisciplinary panel of independent scientists and lay persons should be appointed to enquire into the circumstances surrounding NASA's questionable behaviour in regard to the suspect landforms in particular, and NASA's concept of SETI (Search for Extraterrestrial Intelligence) methodology with respect to the solar system, particularly Mars and the Moon. Among the panel's charges should be the undertaking of an unbiased scientific evaluation of the data gathered by the independent researchers to date, and an oversight committee to monitor NASA's compliance with the additional recommendations set forth below. As members of such an oversight committee, independent researchers Vincent DiPietro, Dr Mark J. Carlotto, and Richard C. Hoagland, representing the three main lines of approach to the subject, should be included.

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FOOTNOTES

1. Among them: Dr Robert M. Schoch, Associate Professor of Science and Mathematics (Geology), Boston University; Dr Horace Crater, Professor of Physics, University of Tennessee Space Institute; Dr David Webb, Professor of Space Education, Research and Technology at Embry-Riddle University, Daytona Beach, Florida; Dr Thomas Van Flandern, former Head, Celestial Mechanics Branch, US Naval Observatory; James Berkland, former Assistant Professor of Geology, Appalachian State University; and L. J. Ångström, the great-grandson of the famous physicist A. J. Ångström and Director of the prestigious Ångström Foundation in Stockholm, Sweden.
2. Although the official decision that the craft was "lost" came on Saturday evening, 21st August, announcement of the loss was delayed until the morning of 22nd August.
3. Reference 15, pages 489-90.
4. Reference 15, page 523.
5. *Ibid.*, page 499.
6. Information as of 22nd September 1993.
7. 164 feet. The proper description is "50 metres/pixel" where a pixel is the smallest bit of digital information in the image.
8. See references 1-7.
9. Reference 1, page 130; reference 2, page 30; reference 4, page 4.
10. The two main extended hypotheses have been put forward by Richard C. Hoagland on the one hand, and the team of John E. Brandenburg, Vincent DiPietro and Gregory Molenaar on the other. Hoagland's view is that the Martian anomalies, if they turn out to be artificial, must be the work of an advanced non-indigenous

technological civilisation which occupied Mars for an undetermined period of time. The Brandenburg, DiPietro and Molenaar hypothesis, which they title "The Cydonian Hypothesis", proposes that the anomalies were built by an indigenously evolved race of humanoid Martians. See references 3 and 16.

11. The Mars Observer spacecraft, launched September 1992, carried the Mars Observer camera, a three-component telescopic imaging system designed for both high- and low-resolution photography of Mars. For a detailed account of the spacecraft and the camera, see references 14 and 15.

12. Reference 11, page 4.

13. See Chapter Nine, Part D, under "Data Release".

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2. Pozos, Randolph R., *The Face on Mars: Evidence for a Lost Civilisation?*, Chicago Review Press, 814 N. Franklin, Chicago, IL 60610, USA, 1986.
3. Hoagland, Richard C., *The Monuments of Mars: A City on the Edge of Forever*, North Atlantic Books, 2800 Woolsey Street, Berkeley, CA 94705, USA, 1992 (2nd ed.).
4. Carlotto, Mark J., *The Martian Enigmas: A Closer Look*, North Atlantic Books, 1991.
5. Torun, Erol, "The Geomorphology and Geometry of the D&M Pyramid", unpublished paper, available through Compuserve, ISSUES Forum, Section 10 under the file name pyrami.rsh.
6. Carlotto, Mark J., "Digital Imagery Analysis of Unusual Martian Surface Features", *Applied Optics*, vol. 27, no. 10, 1988.
7. *Martian Horizons: The Quarterly Journal of The Mars Mission*, vol. 1, nos. 1, 2, 3, Mars Mission, 122

Dodd Street, Weehawken, NJ 07087, USA.

8. Letter of 2 January 1992 from Dr Michael Malin, Mars Observer Mission Camera Principal Investigator, NASA, to Mark Archambault, reproduced in *Martian Horizons*, vol. 1, no. 3, and (in part) in reference 3, page 386.

9. Letter of 23 October 1992 from Mark A. Pine, Chief, Policy & Plans Branch, Office of Space Science and Applications, NASA, to Mr. David Laverty.

10. "Technical Review of *The Monuments of Mars*", anonymous memorandum included in a packet of materials sent to Mr David Laverty by Mark A. Pine, NASA, apparently representing an official evaluation, prepared for NASA, of some of the claims made in Richard C. Hoagland's book, *The Monuments of Mars* (reference 3).

11. "Information on NASA re-photographing the Cydonia Region of Mars", anonymous document distributed by NASA's Office for Legislative Affairs. This document was being distributed as late as October 1992. About 3 1/2 pages in length, it contains no identifying marks as to its author or date of preparation.

12. "Mars Observer Fact Sheet", distributed by NASA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109, dated May 1987.

13. O'Leary, Brian, *Exploring Inner and Outer Space*, North Atlantic Books, 1989.

14. Malin, Michael, G. E. Danielson et al., "Mars Observer Camera", *Journal of Geophysical Research*, vol. 97, no. E5, 25 May 1992, pages 7699-7718.

15. *Journal of Spacecraft and Rockets*, vol. 28, no. 5, September-October 1991.

16. Brandenburg, DiPietro and Molenaar, "The Cydonian Hypothesis", *Journal of Scientific Exploration*, vol. 5, no. 1, pages 1-25 (1991). ∞